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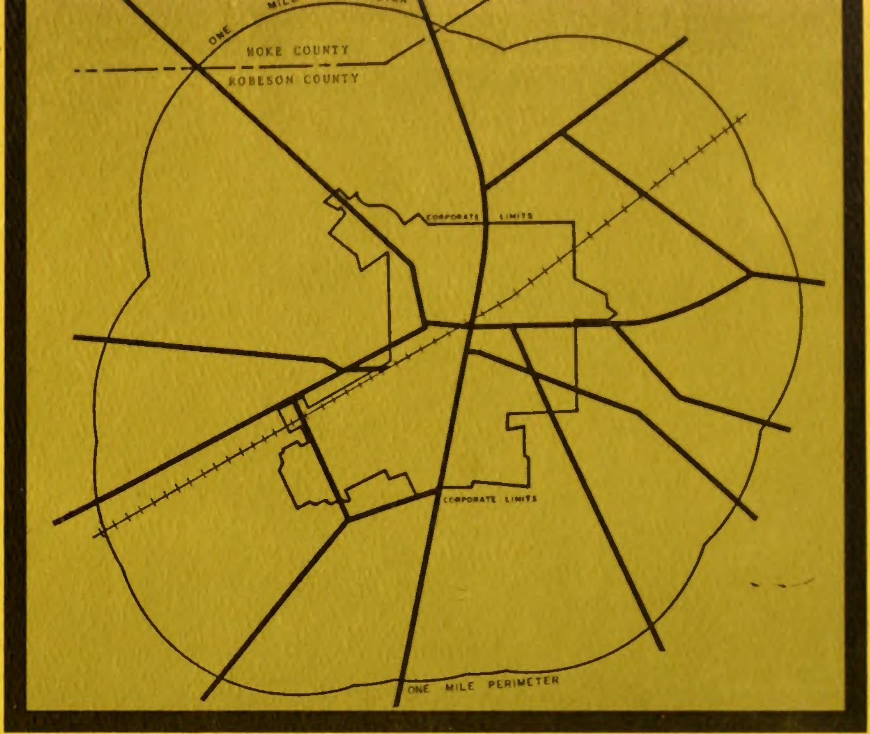
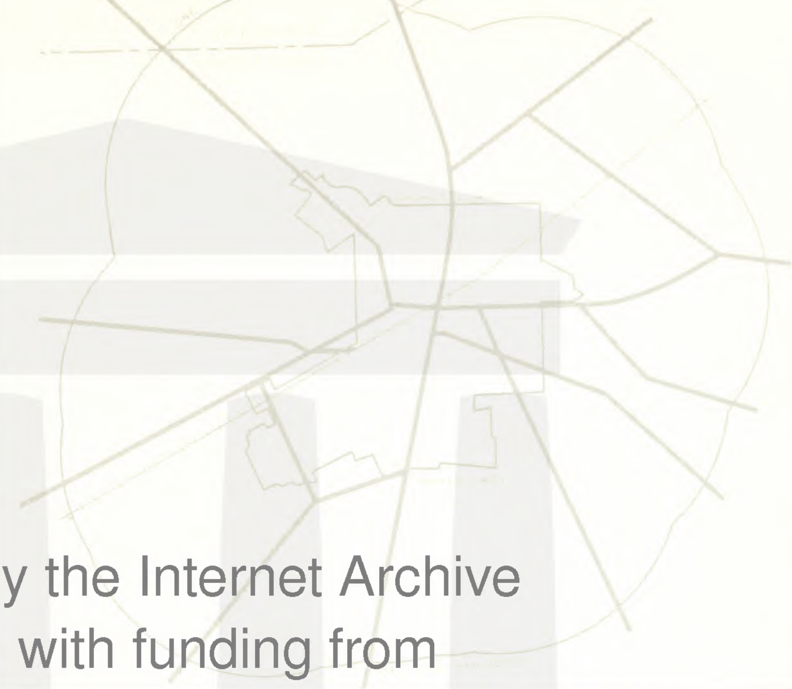


LAND USE SURVEY AND ANALYSIS
RED SPRINGS, NORTH CAROLINA



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LAND USE SURVEY AND ANALYSIS
RED SPRINGS, NORTH CAROLINA

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INTRODUCTION

INTRODUCTION

This report is one in a series of eight contractual elements[1] that are being prepared by the Town of Red Springs and the North Carolina Department of Conservation and Development's Division of Community Planning. Although technical assistance is being provided by the State, the funds for the planning project are partially financed through a grant from the United States Department of Housing and Urban Development and by allocation of the local municipality. This method enables Red Springs to acquire the staff and facilities of a professional planning agency that would normally be beyond the budget capability of a town of its size.

One of the primary steps for a town engaging in comprehensive planning is to make a detailed study of its resources, possibilities and needs. Only after this survey and analysis may subsequent plans be formulated for the orderly and beneficial development of the town.

Purpose

The essential purpose of this report is to provide land use information of the Red Springs area. This simply means that the collection and gathering of data will be illustrated through written information and graphic presentations to show the current uses of land. For example, if a plot of land consists of a house which is designed to accommodate one family, this land will be classified as "single-family residential" land use. Red Springs Mill would be considered as "manufacturing" land use and so on.

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[1] The eight elements in the two-year contract are: Base Mapping, Population and Economic Study, Land Use Survey and Analysis, Land Development Plan, Community Facilities Plan, Public Improvements Program, Zoning Ordinance, and Subdivision Regulations.

This report is intended to be an inventory of what now exists and how it has come about. The information presented in this report, along with the recently published Population and Economy Study, will set the groundwork for the Land Development Plan which will be presented in a later report.

It might also be stated that the primary purpose of the Land Use Survey and Analysis is to explore and analyze the factors that have influenced development and to determine what factors will or should influence development in the future. The land use survey, the mapping of uses, etc., are all necessary steps in making the above determination.

Past development errors and opportunities for future improvements to the area are amplified in this report. It is therefore anticipated that, from this information, ample knowledge will be gained, and the seed of community spirit can be planted in the minds of those who desire to make Red Springs a better town in which to live.

Methodology

In the spring of 1967, a Base Map at a scale of one inch equalling 400 feet was compiled of the Red Springs Planning Area by the Division of Community Planning. This map depicts the physical and political features of the area by showing rights-of-way, lot lines, water bodies, creeks and branches, town limits, county lines, railroads, and street names and numbers.

Land use data was assembled from field surveys and then compiled, coded and recorded on the Base Map. This useful information was then tabulated by the appropriate land use classification and by numbers of acres, percentage of the developed land, and by the percentage of total land area. This was done for the municipal corporate area, the one-mile extraterritorial fringe, and the entire planning area.

A quantitative and qualitative analysis of the land use data was then conducted to determine adequately developed areas as well as problem areas that exist in the community. Although the primary purpose of the land use data is to provide a catalog of facts for the Land Development Plan, the data is also quite valuable in understanding the relationship between the land use and the environment of urban development in the regional area.

Planning Area

The Red Springs Planning Area includes the Town of Red Springs and all the territory extending for one mile beyond its corporate limits. The fringe area around the town is included primarily because much of the future urban growth will take place in this area. Red Springs has the authority to zone the uses of land and to regulate its subdivisions within that part of the one-mile extraterritorial area in Robeson County.[1] North Carolina Session Laws, 1963, Chapter 21 prohibits the power of the town to zone in that portion of the fringe area which lies in Hoke County.

The area within the town limits consists of approximately 2.5 square miles, while the one-mile fringe area contains another eleven square miles. Red Springs' entire planning area therefore represents a land area of more than thirteen square miles.

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[1] North Carolina General Statutes 160-181.2 and 160-226.

Regional Setting

Red Springs is situated in the northwestern portion of Robeson County in Red Springs Township near the Hoke County line. The town is located 15 miles northwest of Lumberton, the County Seat; 28 miles southwest of Fayetteville; 12 miles south of Raeford; 18 miles east of Laurinburg, and a little over 20 miles north of the South Carolina line. See Figure 1.

The town is also situated on the Columbia Division of the Atlantic Coast Line Railroad approximately halfway between Bennettsville, South Carolina and Fayetteville, North Carolina.

Robeson County is found in the southern section of North Carolina's fertile agricultural Coastal Plain Region. In 1911, Hoke County was formed from the portion of Robeson north of Red Springs. Even still, with its 944 square miles, Robeson is second only in North Carolina to nearby Sampson County in size.

Accessibility

While Red Springs is not located on the Federal Highway System, it is, however, situated in the center of a triangle formed by U. S. 74, 401, and 301 - Interstate 95. Each of these highways are within a few minutes drive of the town.

By not being directly on the Federal arteries, the town is unbothered by large amounts of "through traffic" by transients. Even still, the townspeople have reasonably good access to the major cities in the region. The Atlantic Coast Line

REGIONAL SETTING

RED SPRINGS, NORTH CAROLINA

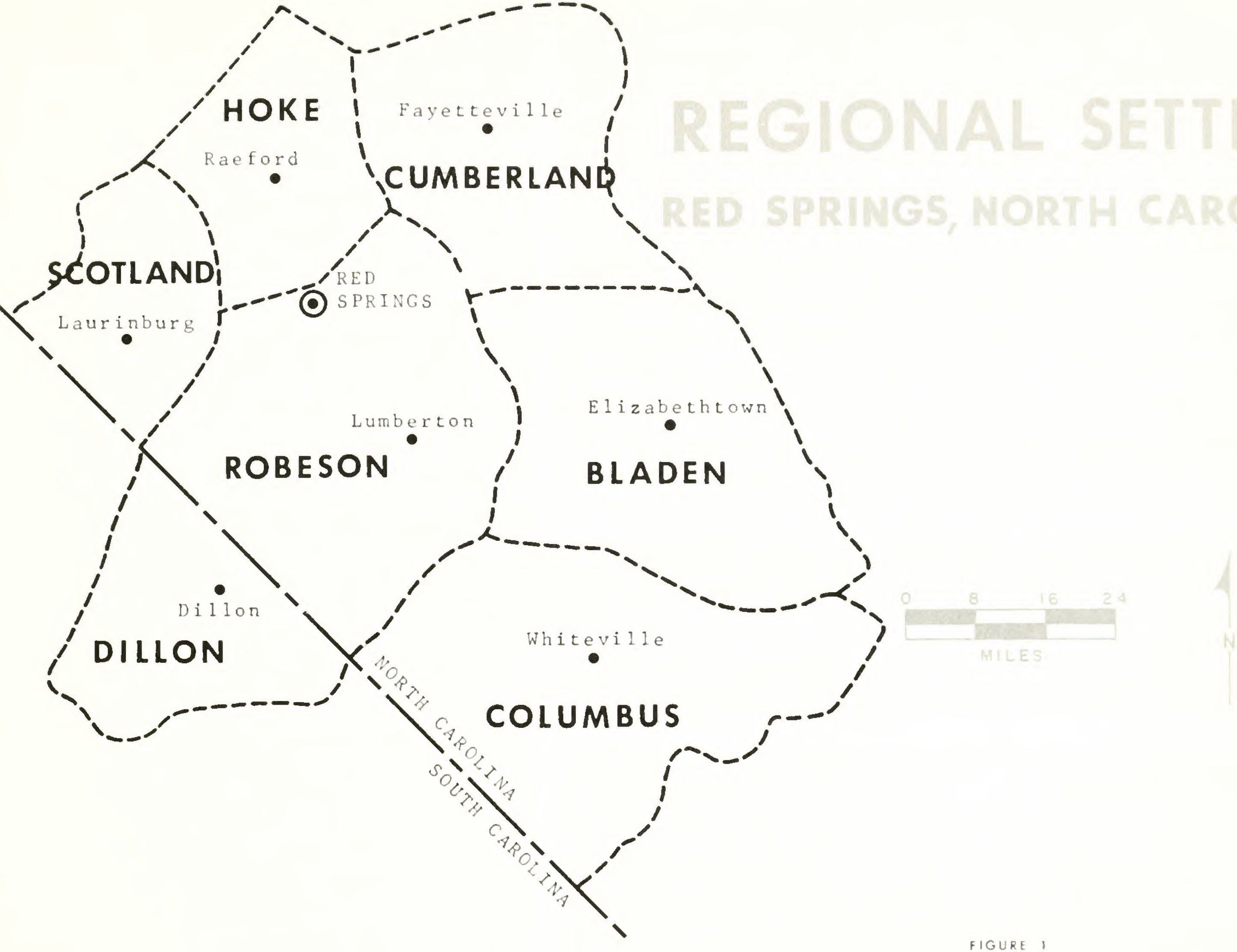

FIGURE 1

Railroad also links the town with points north and south.

Three aviation fields are located with a thirty mile radius of Red Springs. Fayetteville Airport has scheduled flights daily to all points of the country over private companies and Piedmont Airlines. The Lumberton Municipal Airport (4th class) has three 5,000 foot paved runways with a taxi strip to each. Two of these runways have high intensity lighting for night landings. An airport of larger size is located at nearby Maxton-Laurinburg. Once a military field, the airfield has unusually long runways. There are three runways of 150' x 6500', capable of serving most of today's aircraft. One of the runways is lighted at night. There are also perimeter taxiways and a large parking apron 6,000 feet long and 300 feet wide capable of storing many aircraft. The interior triangle formed by the three runways is graded, drained and turfed. All pavement is Portland cement concrete.

These airfields are a source of pleasure to owners and future owners of private aircraft who reside in the Red Springs area, and a great attraction for business and industry.

BACKGROUND

BACKGROUND

Historical Development

Robeson County was settled in the eighteenth century by successive waves of immigrants from the lower Cape Fear region. By 1730, Wilmington was established as a port of entry for immigrants and following the retreating Indians, they pushed up the Cape Fear River and across what came to be known as the Lumber River Valley.

By 1800, the region was explored and widely (if thinly) settled. The immigrants were mostly Highland Scots attracted by tales of plenty and fleeing from the unrest in the Scottish Highlands that followed the Battle of Colloden Moor in 1746 and the subsequent persecutions. There were also some English, Welsh, Scots-Irish and French settlers.

Red Springs, settled in the early 1800's, first established itself as a spa by result of the mineral springs located in the area. In fact, the name of the town is derived from the rust colored sediment caused by iron and sulphur deposits that appeared in the waters. The town's earlier name of "Dora" was changed in 1887 and in 1889 the town was incorporated as Red Springs.

In June, 1884, the Atlantic Coast Line Railroad, then known as the Cape Fear and Yadkin Valley Railroad, completed a branch from Fayetteville to Bennettsville making Red Springs the seventh railroad station in the county. The railroad's importance to the community grew as its services were being utilized to transport pine logs through the area. By 1889 there were five saw mills in and around the town. However, in years to come, the scarcity of timber forced them to shut down; the last in 1962.

The Fayetteville Presbytery established a girl's school in 1896 called Red Springs Seminary. The Reverend C. G. Vardell served as the school's president. The girl's school continued to develop, especially in the field of music, as it gained prestige and popularity. In 1914, its name was changed to Flora Macdonald College. In 1961, Flora Macdonald closed its doors when it merged with Presbyterian Junior College in Maxton to form the new Saint Andrews College in Laurinburg. The school was reopened in 1965 to serve as a sister school to Carolina Military Academy at Maxton. The school was renamed Vardell Hall and presently has a student body of over 200 junior girls.

Many of the decendents of the early Scottish settlers still live in the Red Springs area. This is quite evident by the presence of many McLeans, McMillans, McNeills and others that have caused this area to be dubbed "The Land of the God Blessed Macs."

Population and Economy[1]

The population growth of Red Springs has shown a steady increase since the 1900 Census recorded the town as having 858 residents. A slight decrease was reported between 1910 and 1920 but this was offset by the following 1930 Census. In 1960, a population of 2,767 was recorded for the town. However, sizable areas have since been annexed and a population of approximately 4,000 would be more accurate today.

There is very little urban development in the fringe area surrounding the town in that is has remained mostly farm land. An estimated 1,500 persons reside in the area of Red Springs Township that is beyond the corporate limits of the town.

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[1] Greater detail on the population and economy of Red Springs is found in the Population and Economy Study of Red Springs, Division of Community Planning, June, 1967.

The township is tri-racial in that 56 percent of its 1960 population was white, 35 percent was Negro, and 9 percent was Indian. On the county level the Indian population was much higher with 29.5 percent of the 1960 total.

Red Springs' economy is dominated by manufacturers of textiles. Nevertheless, the town does have proportionately more persons with educational service skills than is common throughout the State. A large portion of these persons are teachers who are employed in Red Springs schools as well as educational institutions in nearby communities.

Perhaps the biggest economic hurdle that Red Springs will have to cross is to obtain some new and diversified industries. If and when this occurs, a population increase will also result.

LAND CAPABILITY

LAND CAPABILITY

A community's natural environment must be taken into consideration before town planners can determine which land is suitable for intensive urban development. This section of the report will present the significant influence that the physical characteristics of the land and weather have upon Red Springs. These natural determinants include the topography, water, drainage, soils, undeveloped land, and climate.

Many of the problems of urbanization and town development can be avoided by giving careful attention to these characteristics of the physical environment before any serious policy or case decisions are made. The needless waste of land, soil erosion, water and air pollution, duplicated utilities, inadequate services and other undesirable effects of the manmade living environment can be prevented through the logical use of land resources.

Topography

As of January, 1967, there have been no maps prepared by the U. S. Geological Survey that are of sufficient scale to give the topography of the Red Springs area in detail. A generalized study of the area's altitude was conducted from soil maps, aerial photographs, drainage basin maps, U.S.G.S. maps of surrounding communities, and other published materials.

There is very little elevation variation in Red Springs and its surrounding fringe area. When compared to portions of the State to the north and west, it is considered relatively "flat." The same situation holds true, in general, for Robeson County since its highest point is only about 100 feet more above sea level than its lowest.

Red Springs is located on one of the highest points in the county. The town has an altitude of approximately 204 feet; while the lowest point - Fairmont- is only about 105 feet above sea level. Robeson County's topography shows an increasing elevation pattern as one travels from the southern end of the county (near the South Carolina and Columbus County lines) toward the Red Springs area at the Hoke County line. No excessive slope can be found in the entire area; therefore, the town is relatively level without definite natural drainage systems. Nevertheless, the majority of its soils are sandy with good drainage characteristics, thus alleviating the drainage problem somewhat.

The range of grade is normally under ten percent which permits residential, commercial, and industrial construction throughout the area without extensive excavation being required. While no sizable parcel of land in the area would not be capable of utilization for potential urban development, intelligent consideration should be given to any change in the land's natural contours during construction projects.

Drainage

Urban development is directly affected by the natural environmental factor of drainage. Development problems created by flooding and erosion can be avoided by using the natural drainage and understanding the limitations set by soils and topography.

As previously mentioned, the Red Springs area is well drained with only a few exceptions. Occasional flooding after heavy rains is experienced at the West Tenth Avenue area and between Highway 71 and the ball park. Little Raft Swamp along with a number of intermittant branches and drainage ditches channel the surface water into the Lumber River.

Building roofs and expanses of paving in the urbanizing developments increase the amount of water that runs off the area. It also reduces the area that was available for the water to be absorbed into the ground. In the case where this becomes excessive, additional protective and preventive measures should be taken. Adequate storm sewerage is the best deterrent to this situation.

Ground Water

Perhaps the most important single factor that influences the development of any urban region is the area's water resources. A specific quality and quantity of water is necessary for human consumption, industrial uses, sanitary purposes and recreational facilities. The basic supply of water through the planning area comes from underground sources. Other water bodies in the area include Little Raft Swamp, several small streams and manmade lakes and ponds. The Lumber River is located about eight miles southwest of town.

The North Carolina Department of Health conducts routine inspections of municipal water supplies and in turn gives ratings according to U. S. Public Health Service Standards. These standards pertain to the physical and chemical properties of water as a basis for quality control. Analysis of water now being received from the three major wells in the town reveals the following information:

TABLE 1

RED SPRINGS MUNICIPAL WATER SYSTEM WELLS

Well Number	Depth	Gallons Per Minute Yield	Date	Location	Alkalinity	Iron	Manganese	PH	Total Hardness Calculated as $CaCO_3$
1[a]	435	500	1949	East of Town Treatment plant	2.00 ppm	5.56 ppm	0.00 ppm	4.8	8 ppm
2[a]	433	500	1951	West of Town Treatment plant	2.00 ppm	3.47 ppm	0.00 ppm	4.8	5 ppm
3	-	-	1946	Mill Treatment plant	(Abandoned in January, 1967)				
4[b]	425	708	1966	East of Mill Treatment plant	2.00 ppm	1.05 ppm	0.00 ppm	6.7	4 ppm
5	420	700	1967	Peterson Street	(To be operational by June, 1967)				

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[a] Source: From a report by North Carolina Department of Health, dated August 30, 1962.

[b] Source: From a report by North Carolina Department of Health, dated February 1, 1966.

Soils[1]

Soil is formed from its parent rock, and molded by climate, organisms (mainly vegetation), relief, and time. Soil characteristics are an important variable that must be considered when seeking to determine the suitability of land for urban development. It is important to know the texture, structure, consistency, and drainage of soils in areas where buildings will be erected, streets constructed, and excavations made for the laying of utility lines. Expensive mistakes can be avoided if it is known how well the land can support the activities. This section of the report is written to provide the reader with a basic introduction to these characteristics in Red Springs and the Coastal Plain Region that surrounds it.

The sedimentary soils in the Red Springs area are typical of the soils of the Atlantic and Gulf Coast plains. These soils are classed into two distinct series -- the Norfolk and the Portsmouth. The Norfolk series includes the light-colored soils, underlain by yellow or brown sand, sandy clay or loam. By reason of their topographic position, the surface drainage is fairly good. The Portsmouth series comprises the dark-colored and black soils which are underlain by mottled gray sandy clay and clay. They occupy the level and depressed areas and have very poor natural surface drainage, being in many places in a semiswampy condition. The Portsmouth soils are derived from the same kind of material as those of the Norfolk series; however, they have been for a long time in a semiswampy condition which has favored the accumulation of large quantities of vegetable matter and has given them their dark color.

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[1] Soil Survey of Robeson County, North Carolina, W. Edward Hearn, North Carolina Department of Agriculture, 1909.

The soils in the area mapped "Swamp" (see Figure 2) vary in texture from a heavy loam to a coarse sand, and no textural or type classification could be accurately made due to the wet conditions. If drained, much of the soil could be classed with types of Portsmouth series. A considerable part of the Little Raft Swamp, north of town, consists of a black mucky loam to a depth of several feet. This muck owes its origin to the decay and accumulation of vegetable matter. The swamp area averages a quarter-mile in width and is most unsuitable for urban development purposes. However, if and when properly drained, cleared, and devoted to crops to which it is adapted, the area would prove valuable as farming land or even for recreational uses.

In order to drain the swamp area, it will be necessary to clean out, deepen and straighten the channel so that all the water can flow out of the area and ultimately to the ocean. When the swamp is drained, the upland areas will also be better drained. By better drainage, large areas of good land can be reclaimed and the healthfulness of the region improved.

In summary, it should be remembered when viewing Figure 2 that the Norfolk Sand and Norfolk Sandy Loam are general purpose soils and are easily tilled. They drain well, produce good crops, suitable for septic tanks, and can easily support urban development. On the other hand, the Portsmouth Sandy Loam and Swamp soils are also suited for agricultural uses but are inadequate for urban development because of their insufficient natural surface drainage.

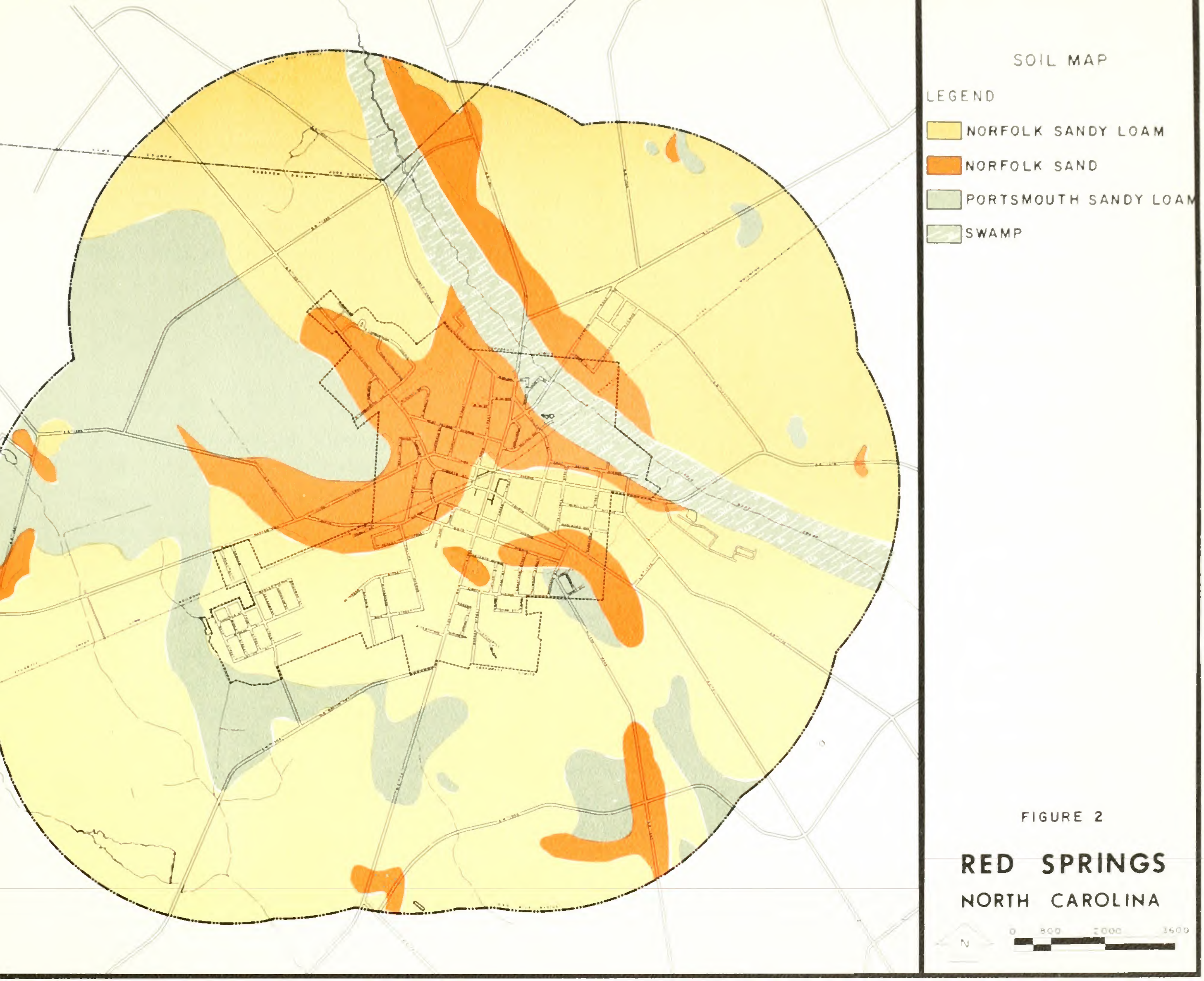

FIGURE 2

RED SPRINGS

NORTH CAROLINA

TABLE 2

SOIL SUITABILITY - RED SPRINGS PLANNING AREA

DESCRIPTION	SUITABILITY		LIMITATIONS			
	Agriculture	Woodland	Railroad and Road Construction	Industry	Septic Tanks	Basement Construction
Norfolk Sand	Good	Good	Slight	Slight	Slight	Slight
Norfolk Sandy Loam	Good	Good	Slight	Slight	Slight	Slight
Portsmouth Sandy Loam	Fair-Good	Fair-Good	Severe	Severe	Severe	Severe
Swamp	Poor	Good	Severe	Severe	Severe	Severe

Undeveloped Land

There is a large amount of vacant and undeveloped land within the corporate limits of Red Springs. This includes woodland, unused lots, farmland, and the Little Raft Swamp area.

The two largest expanses of vacant land in the town are in the northeast and southwest sections. The largest of these two is south of the Maxton Highway between the Peterson School area and the Midstate Mill Village. This vacant area (approximately 100 acres in size) is devoted almost entirely to farms and woodlands. Little access is afforded to this area since it is not served by any through streets or roads. Before urban development can occur in this area, there must first be some access made available.

Red Springs' second largest vacant area extends to the north and east of the Vardell Hall campus. This area is bisected by Little Raft Swamp causing that particular strip bordering the water course to be undesirable for urban purposes. The majority of this section is utilized as woodland.

In addition to the large undeveloped areas near the town's corporate limits, there are also several gaps of land between developed areas. One very noticeable gap is the vacant property west of South Main Street and east of Phillips Avenue. A sizable portion of undeveloped land is also located between Red Springs Elementary and High Schools.

Orderly expansion of land uses will prevent expensive utility problems for a community. It is unnecessarily expensive for a town of Red Springs' size to extend water and sewer lines and provide other facilities to areas beyond vacant parcels of land. This is true because the town must construct and maintain services through undeveloped areas which neither use nor pay for the conveniently located facilities which traverse them.

Undeveloped land occupies the largest amount of acreage in the Red Springs Planning Area. Within the town limits approximately 360 acres of land are classified as undeveloped. This is 34 percent of the total land acreage in the town. Within the one-mile perimeter area, where a vast majority of undeveloped acreage occurs, 5,767 acres or over 93 percent of the total acreage is devoted to farmland, farm dwellings and undeveloped acreage.

Climate[1]

Weather has always been a favored topic of conversation for it is the natural resource which has the greatest effect on man's life. The climate has always been extremely important to farmers in that their livelihood depends upon it. However, climate and weather records are vastly important to many other segments of a community's economy. The design of roads, water supplies and sewerage systems; the location of certain industries; and the development of recreational areas are a few of the many activities in which climate is an important factor.

The average annual temperature for the Red Springs area is about 63 degrees Farenheit. Seasonal temperatures range from July averages of 78 to 80 degrees to January averages of 46 to 48 degrees.

The average length of the freeze free season is between 220 and 230 days. This "growing season" usually begins with the last freeze which occurs around March 22nd and concludes with the first freeze which occurs around November 9.

Annual precipitation averages 46 and 48 inches with the heaviest rainfall occurring in the months of July and August. The rainfall during this period is around 5.5 inches per month, whereas, during the driest months (October and November) the average monthly precipitation is nearer 2.6 inches.

Much of the discomfort North Carolinians feel in hot weather is due to rather high humidity. Relative humidity is expressed as a percentage; it states the degree of saturation or the percentage of moisture in the air as compared to the maximum amount of moisture the air could contain "at a given temperature."

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[1] Source: Weather and Climate in North Carolina, Agricultural Experiment Station, North Carolina State College, Raleigh, North Carolina, 1958.

Over Red Springs around the year, the relative humidity averages about 80 percent late at night and about 50 percent in the afternoon. It is a little higher in the winter than during the other seasons of the year.

The Red Springs area does not experience severe droughts such as occur at times in the Great Plains States; however, as is true with most other "humid" areas, it does have recurring deficiencies of rainfall. Actually, the area gets plenty of rain almost every year, but in some years much of it comes in the winter when it is not needed by crops. Almost every summer brings a certain amount of drought to portions of the State, sometimes light, sometimes severe as in 1953 and 1954. As a result, farmers have found it profitable to irrigate such crops as tobacco to supplement the rain during such dry spells.

On a year-round basis, the wind over Red Springs blows from the southwest to northeasterly directions. This holds true for the greater part of the year; however, in September and October the prevailing wind direction is from exactly the opposite direction - the northeast. This phenomenon is because the autumn season brings prevailing high pressure over the north central and northeastern states, while the passage of low pressure storms through the State's off-shore waters increases at this season.

Wind speed varies considerably, but in general it averages about seven to eight miles per hour in the Red Springs area. The wind speed is least during the night, reaching its lowest point around daybreak, then increasing during the day to a maximum in the middle of the afternoon. This general pattern is, of course, interrupted by storms passing near or across the State.

Destructive winds are infrequent, but do occur occasionally in connection with hurricanes which at times pass near or across North Carolina. Dangerous winds also occur during some local thunderstorms and on rare occasions in connection with tornadoes.

MUNICIPAL WATER & SEWERAGE

MUNICIPAL WATER AND SEWERAGE SERVICE

A community's chances for future growth and expansion will, in a great part, depend upon the availability of an ample water supply and adequate sewerage system. Even more important, the supply of water and disposal of sewage are two municipal services fundamentally basic to the health, comfort and general welfare of the community.

This section of the report will survey Red Springs' water sources, supply, yield, storage facility, and chemical and physical property analysis. A concluding paragraph discusses the town's future water needs and prospects.

Red Springs' sanitary sewerage system is also discussed in this section. Methods of waste collection and disposal are also analyzed as to future needs.

The reader who desires greater detail on either the water or sanitary sewerage systems of Red Springs should consult the Community Facilities Plan for Red Springs, published by the Division of Community Planning, May, 1967. Copies of this report are available at the Town Hall.

Water System

The Town of Red Springs has two water treatment facilities. The original town system was begun about 1911 with the drilling of deep wells and laying out of water mains. This system was gradually expanded and improved to meet the growing demands of the town. The area known as Midstate Mill, annexed by Red Springs in 1964, also had its own independent water system. This system was begun in the early 1940's and was maintained by the mill until it was conveyed to the town in 1958.

Red Springs' source of water comes from three producing wells. A new well, being drilled on Peterson Street, is expected to be operational by June, 1967. This new facility should produce 700 gallons of water per minute, which along with the 1,700 gallons per minute afforded by the other wells would give the system a maximum capacity of 2,400 gallons per minute.

Water from the town wells is very soft and acid in nature and contains a high concentration of Iron. The water is therefore treated to remove solids and chemicals are added for purification purposes. The town plant is currently operating at its capacity which is 450 gallons per minute. The treatment plant at the mill area has a capacity of 300 gallons per minute but is only operated at 200 gallons per minute.

Distribution of water is enabled by pressure created by two elevated storage towers. An older 75,000 gallon capacity tower is located near the center of the system at the rear of the Town Hall and a relatively new 200,000 gallon facility near the northern limits of town. Pressured water is distributed to users by a network of water mains that, for the most part, are six inches in diameter.

Approximately 95 percent of all the residents within the town limits are served by this system as well as two textile mills and some residences outside the town limits. Figure 3 illustrates Red Springs' water coverage.

The town's pumping capacity is over 1,000,000 gallons per day. Maximum daily consumption is around 500,000 gallons per day, whereas the average daily use is about 381,500 gallons per day.

A recent engineering study[1] discussed deficiencies in the existing treatment, storage and distribution of the Red Springs water system. A bond issue for the

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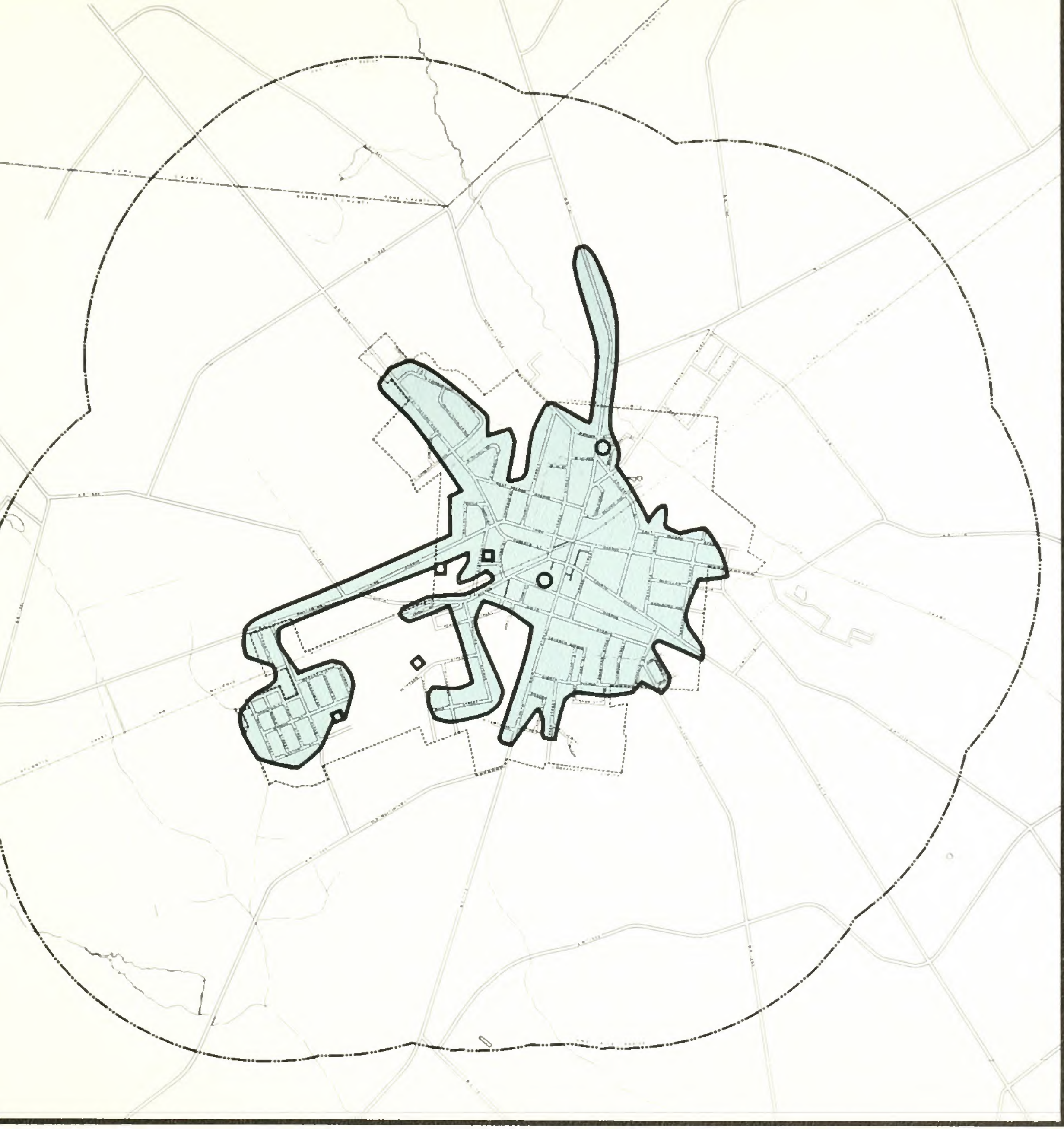
[1] Moore, Gardner and Associates, Inc., Consulting Engineers of Asheboro, North Carolina, made a study of the Red Springs water facilities in 1964.



GENERALIZED AREAS OF WATER SERVICE

□ WELLS

○ STORAGE TOWERS

FIGURE 3

RED SPRINGS

NORTH CAROLINA

improvements recommended in this study was defeated at an election in 1964. However, several improvements to the system have been made since that time including two new wells and the installation of some new water mains.

The water system of Red Springs was designed when the town had a much less population and valuation, with additions to the system from time to time as pressure for added service was demanded. These additions were made in a manner to provide immediate service, with little regard for the future demands to be made on the over-all system for ever increasing service and fire protection requirements. Before Red Springs can adequately plan to its future population growth, it must first determine a course of action that will be taken to relieve the current condition of having an inadequate water system.

Sewerage System

Red Springs also operates two sewage treatment plants. A domestic treatment plant, serving the town and mill areas, is located east of town. This plant, constructed in 1958, has a capacity of 500,000 gallons per day and a current average flow of approximately 420,000 gallons per day. Although this would indicate that it is probably overloaded at peak periods, the North Carolina State Department of Water Resources has approved its operation. Secondary treatment is provided by the "trickling filter process." (Effluent from both plants is discharged into the nearby Little Raft Swamp.)

A sewage lagoon was built by the town in early 1962 to provide waste treatment for industries located in an industrial park north on N. C. 211. The capacity of the lagoon was to be 20,000 gallons per day; however, the average daily flow through the lagoon is now 80,000 gallons per day. Properly designed and maintained

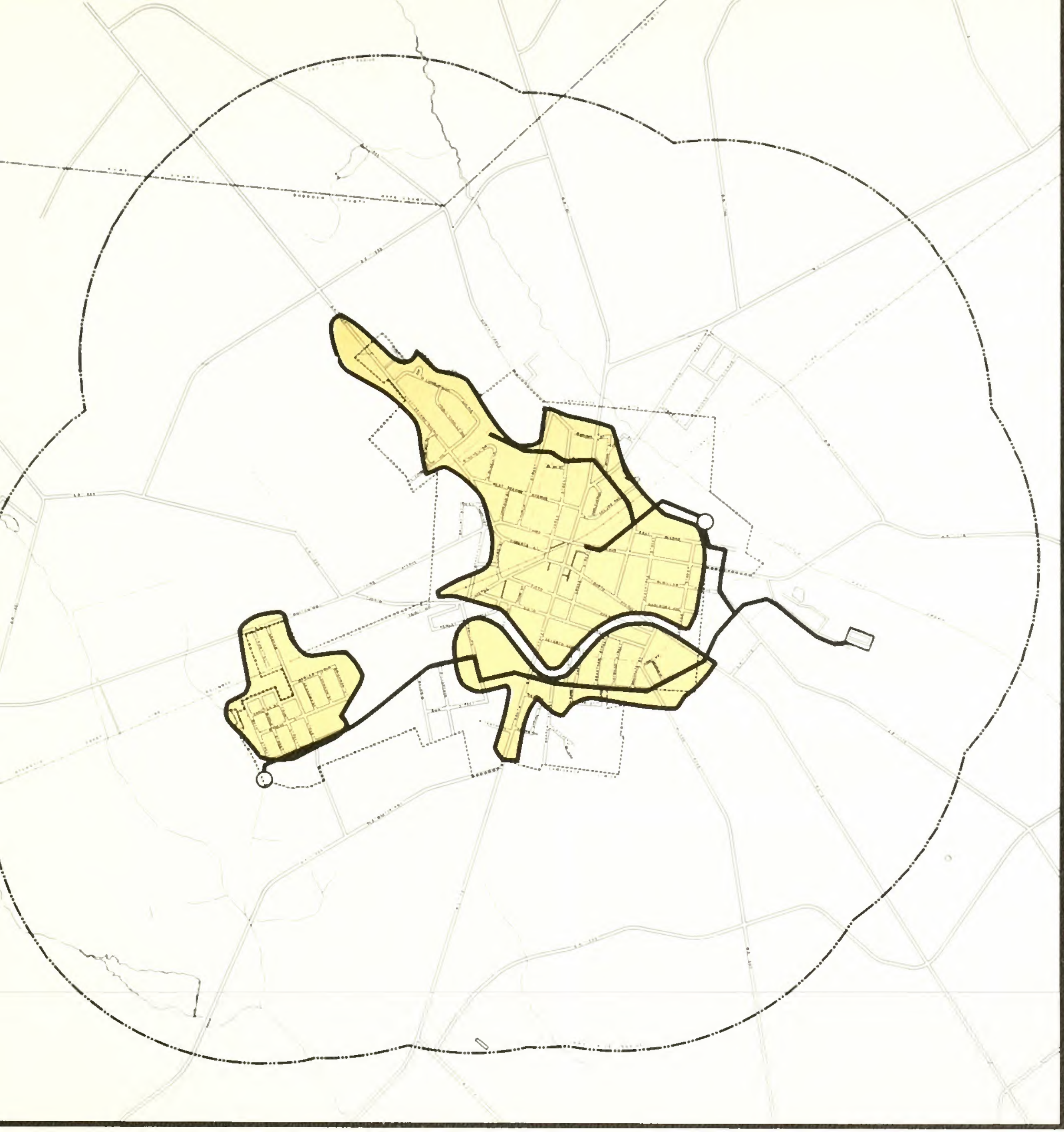


FIGURE 4

RED SPRINGS

NORTH CAROLINA

lagoon facilities provide adequate sewage treatment. However, this existing facility is obviously overloaded under current flows and therefore not providing the required level of treatment. As a result, the lagoon's effluent is seriously contaminating Little Raft Swamp.

The present collection system serves about 95 percent of the town's residential, commercial, and industrial users. A collector system consists of approximately thirteen miles of sewers and two lift stations. The lift station in the northeast section serves most of the town. Another lift station, located at the old mill sewage treatment plant, serves the mill area. Gravity flow lines serve the Peterson area and the extreme southern sections of Red Springs. See Figure 4.

URBAN DEVELOPMENT

In the well known novel, Uncle Tom's Cabin, there was a character called Topsy. A question was asked in the story concerning the little girl. "How did Topsy come about?" The answer was simple. "Well, I guess Topsy jest grew."

A town's physical image does not "jest grow" nor does it come about by mere chance. There are innumerable factors which affect the image of a community as an urban living environment. Natural characteristics, such as climate, soil, and water, have significant influence in terms of capability of the land to be used for development. However, there are also many other factors, created by past urban development, that give a town an individual character.

Urban development in Red Springs has not just happened by chance. It is the product of forethought and vision on the part of many. Although there have been mistakes in the past, town officials are setting out to eliminate future development errors by the means of a comprehensive urban planning program.

Communications

Red Springs is served by the Carolina Telephone and Telegraph Company, as is Maxton, Parkton, Raeford, St. Pauls and other towns in the area. The toll center for the various telephone exchanges and offices of the region are located in Fayetteville with connecting circuits. The telephone wiring is mostly strung on poles maintained jointly by the telephone company and the electric power distributor in the area. This is done through ordinary utility easement arrangements and normally lacks any demand for land ownership. Public telephone booths are placed at various commercial locations throughout the town. A local maintenance office is located at the corner of West Second Avenue and Vance Street.

A Western Union Telegraph Office is located at 104 Shannon Road to serve the communications needs of residents and visitors. Maxton and Raeford also have Western Union offices.

Another form of communication in the area is the Town Police Department radio system. This system is on a hookup with the Robeson County Sheriff's Department and the local rescue squad.

A radio broadcasting corporation has recently filed an application with the Federal Communications Commission requesting permission to construct an AM radio station. If the application is approved, the station will operate with a power of 5 kilowatts on 710 kilocycles, serving the general Red Springs area. The corporation proposes to erect its studio and towers one mile north of town on Highway 211.

Power and Light

Electric power is purchased from Carolina Power and Light Company by the Town of Red Springs who "resells" it through a municipally owned distribution system. Major users such as Red Springs Mill and Celluknit are supplied directly by Carolina Power and Light. The franchise includes the corporate area of the town, the one-mile fringe area, about two miles along Duffie Road (West Second Avenue), and about four miles south towards Philadelphus. The system capacity has recently been increased to meet the next decade's anticipated demand.

Electricity for certain rural areas beyond the planning area is supplied by the Lumbee River Electric Membership Corporation. An office for this corporation is located on East Fourth Avenue.

Streets

The street system is the principal means of circulation in any urban area. These channels of transportation and their various related facilities are integral components of the living environment. A transportation system is a large user of land and normally serves all the land uses in the community.

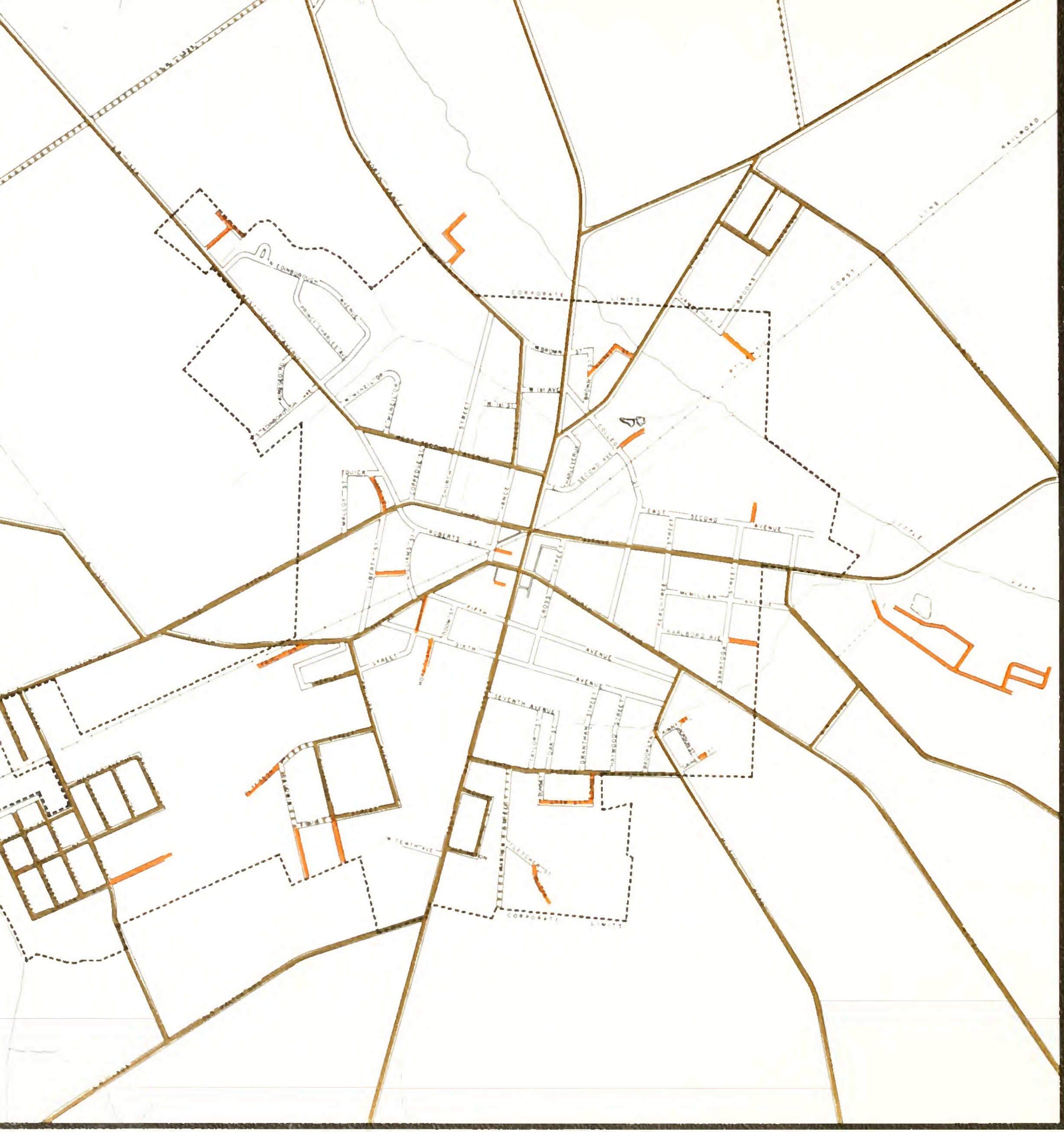
Circulation networks not only provide a framework for land development but also influence the structure of the community's urban development to a great extent. Streets should be well located and designed efficiently to function properly. They must be flexible so as to serve a multitude of complex purposes. Once in place, a transportation facility is quite difficult and obviously very expensive to move.

Since the street system of Red Springs, as in most North Carolina towns, was designed and improved in "horse and buggy days," there are some undesirable situations for modern vehicular movement. This enigma is substantially increased by offsetting intersections, improper street alignment, poor street design, narrow rights-of-way, dead-end streets, and unpaved roads.

The State maintains about seven miles of the twenty-one miles of streets in Red Springs. North Carolina Highways 211, 71 and 72 pass through the town. Essentially, all of the State system streets are paved and less than two miles of the town streets are unpaved. Most of the unpaved streets are located in the Peterson area and the southeastern section of town.

The Powell Bill and utility funds are used to pave and maintain Red Springs' streets. Maintenance is performed by the town's Public Works Department.

New streets are graded by the developer and in turn are paved by the town. Street repairs are made when necessary but not to any set schedule.



STREET SYSTEM

STATE MAINTAINED
PAVED ━━
GRADED ⋯⋯
TOWN MAINTAINED
PAVED ══
GRADED ━━

FIGURE 5

RED SPRINGS
NORTH CAROLINA

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Traffic

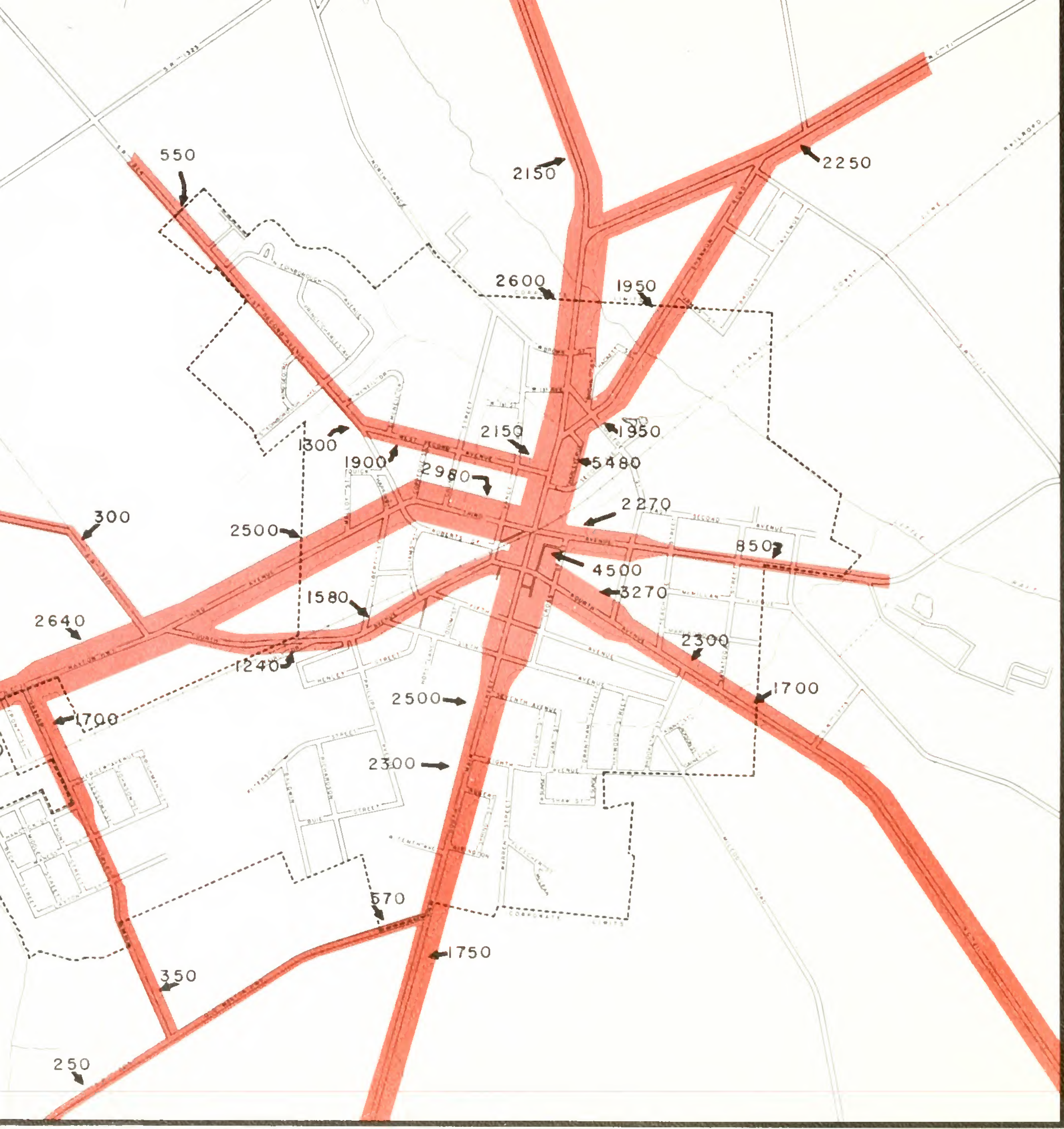
The volume of vehicles using the streets, roads, and highways is a significant factor in the planning program. Unless carefully planned, traffic can congest at strategic points in a community causing series "tie-ups." The circulation of vehicles entering, leaving and passing through certain points of a town are measured by traffic counts. The State Highway Commission utilizes traffic volume counts to assist in the complicated process of thoroughfare planning. These counts are made at varying intervals and averaged for the typical twenty-four hour daily total.

In 1965 the State Highway Commission conducted a comprehensive count for the Red Springs Planning Area indicating the heaviest concentration of traffic volumes. As might be expected, the major stream of traffic flows along Highways 211, 71 and 72. Average daily traffic volumes reach a maximum of between 4,500 and 5,480 vehicles in the Central Business District's Main Street at the Third Avenue intersection.

A major traffic generator in the area is Red Springs Mill in that a large number of employees travel to and from the mill by automobile. This situation creates a rather heavy traffic load on West Third and West Fourth Avenues.

Two other traffic arteries in Red Springs had large volumes of traffic in 1965. Both Shannon Road and West Second Avenue had peak counts of approximately 1,900 vehicles daily. The main problem, however, is the large number of vehicles that travel through the town's Central Business District that are not going there for business purposes.

Traffic flow in 1965 can be seen on the Average Daily Traffic Volume Map (Figure 6).



ANNUAL AVERAGE
TRAFFIC VOLUME

FIGURE 6

NO. OF CARS PER 24 HRS

200 – 999
1000 – 2499
2500 – 3499
3500 – 5500

RED SPRINGS
NORTH CAROLINA

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Railroad

A significant manmade contribution to the shaping of Red Springs' urban development has been its railroad. The area is served by the Atlantic Coast Line Railroad which runs northeast to southwest through the community. For the most part, it is paralleled by Highway 71.

The tracks extend through the town's Central Business District at the Main Street and Third Avenue intersection. It is at this point that most of the town's vehicular traffic occurs. On an average, however, only 4 trains move through the town daily and this is usually at night when volumes are at a minimum.

It was once considered to a town's advantage to have a railroad bisect its business district. This indeed caused many small towns to prosper in the early days of railroad travel. Today, however, it is not considered as desirable, but relocating a railroad to the outskirts of a community would involve expenses beyond all reason.

Annexations

There are many individual and interrelated economic, social, physical, and political aspects involved in the size and shape of any municipality. There are also many towns of Red Springs' size with corporate limits and zoning restrictions and subdivision controls well beyond the existing urban development. Such regulations have a profound effect upon the living environment in the community.

Red Springs' corporate limits were approximately a mile square when the town was incorporated in 1899. During the past sixteen years, the town's physical size has increased several times and in various fashion. The largest and most significant of these extensions was the 1964 annexation of a large portion of the unincorporated community of Midstate Mill. This annexation not only increased Red Springs' physical size by approximately one-half, but also added to its population an estimated 972 persons.

Along with the inclusion of any additional area within the corporate limits of the town goes the legal responsibility of providing the various municipal services and facilities to the new area on the same basis as those in the existing town. It should be remembered, however, that any future expansion of the incorporated area of the town must rationally be preceded by thorough investigation and economic feasibility of annexation.

THE USE OF THE LAND

THE USE OF THE LAND

Land uses are merely the activities which take place upon any given land. These are categorized by a functional grouping into workable classifications. In the Red Springs Planning Area the appropriate uses were divided into those of residential, manufacturing, trade, services, social and cultural, and undeveloped. The Central Business District uses will be discussed in a subsequent section.

A detailed survey of all land uses within the area was conducted in April, 1967, and measured according to the following system.

LAND USE CLASSIFICATION SYSTEM

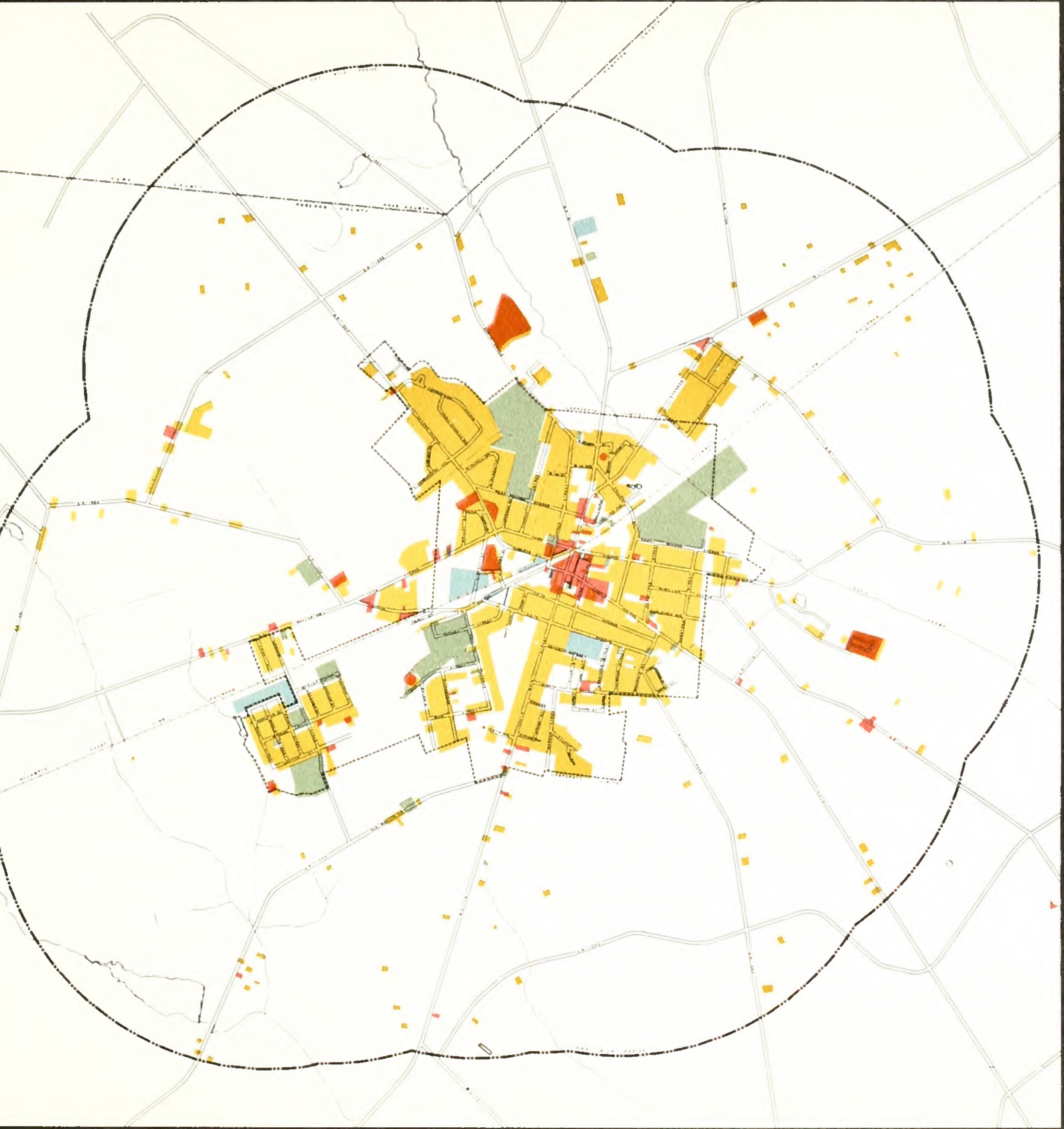
Land Use Categories	Types of Uses
Residential	Single family houses, duplexes, multi-family dwellings, rest homes, mobile homes and vacant dwellings.
Manufacturing	Manufacturing plants, processing, milling, ginning, and wholesaling establishments.
Trade	Commercial businesses offering tangible goods for sale, e.g., service stations, grocery stores, department stores, automobile sales, etc.
Services	Similar to trade category, except of an intangible nature. Includes barber shops, insurance, banking, doctors' and attorneys' offices, municipal offices and facilities, etc.

TABLE 3

EXISTING LAND USE STATISTICS, RED SPRINGS PLANNING AREA, 1967

	Town Area		One-Mile Fringe Area		Total Planning Area	
Land Use	Acres	Percent	Acres	Percent	Acres	Percent
Developed Land	712.0	66.4	430.0	6.9	1,142.0	15.7
Undeveloped Land	360.5	33.6	5,767.0	93.1	6,127.5	84.3
Total Land	1,072.5	100.0	6,197.0	100.0	7,269.5	100.0

		Percent of Land In Use		Percent of Land In Use		Percent of Land In Use
Residential	372.0	52.3	162.5	37.8	534.5	46.8
Manufacturing	19.0	2.6	15.5	3.6	34.5	3.0
Trade	14.5	2.0	10.0	2.3	24.5	2.2
Services	19.5	2.8	27.0	6.3	46.5	4.1
Social & Cultural	114.0	16.0	17.5	4.1	131.5	11.5
Transportation	173.0	24.3	197.5	45.9	370.5	32.4



EXISTING LAND USE

LEGEND

🟧	RESIDENTIAL
🟦	INDUSTRIAL
🟥	TRADE
🟥	SERVICES
🟩	SOCIAL & CULTURAL
☐	UNDEVELOPED

FIGURE 7

RED SPRINGS

NORTH CAROLINA

Land Use Categories	Types of Uses
Social and Cultural	Public and semi-public lands, such as schools, playgrounds and parks, theatres, libraries, riding stables, churches, etc.
Undeveloped	Structures and land in agricultural or woodland use, lakes and water areas.

The above land use categories are treated separately in the suceeding analysis. In each discussion, principal emphasis is placed upon the distribution, size, percentage of developed land, and significance of each respective category of land use. The Existing Land Use Map on the preceding page depicts these numerous land uses in a generalized graphic form.

Residential

Of the total land area of 7,269.5 acres, 534.5 acres are in residential use. This dominant land use category includes 52.3 percent of the developed acreage within the town limits, 37.8 percent within the fringe area and 46.8 percent of the total developed land within the entire Red Springs Planning Area.

Residential development has taken place more or less symetrically from the center of town with the exception of the Midstate Mill area in the southwest quadrant. Between this area and the older portion of the town is about 100 undeveloped acres. Excluding five blocks on Main Street, devoted almost exclusively to trade and service activities, this general business area is the focal point or central complex of residential land concentration.

Practically all residential development is within the confines of the town limits. Approximately 150 persons reside in the Pecan Orchard Subdivision which is located off Shannon Road beyond the northeastern town limits. Around 230 people reside in a not so "desirable" area beyond the western town limits in the Third and Fourth Avenues area.

There is a total of 1,021 dwelling units within the present town limits and, of these, only ten are vacant. Two mobile homes are found in the town and ten multi-family dwellings, excluding the Vardell Hall dormitories. Therefore, almost all housing in Red Springs is designed for single family living.

In the one mile fringe area, housing is much less compact. In fact, only 325 dwelling units could be found in the fringe and with the exception of the two previously mentioned areas, the majority of them are farm and tenant farm houses. It could be said that the town is extensively surrounded by farms and woodlands.

A large portion of town in the northeast of town beyond Vardell Hall has no residential growth; justifibly so, because of its location in the Little Raft Swamp flood plain. This area, over 50 acres in size, should most definitely remain undeveloped throughout the planning period.

Housing in the mill area is very compact in that most of the lots are approximately 70 feet wide. Other lots of small size, located in the town, are found among Graham and Haywood Streets and in the Hackett Street area.

There has been very little encroachment of other land uses into residential areas with the exception of some "corner grocery stores" and service stations. Some strip commercial development has occurred along East Fourth Street (N. C. 211).

The following three classifications were used in a visual external survey to determine housing conditions in the town:

Sound - Needing only minor repairs, if any,

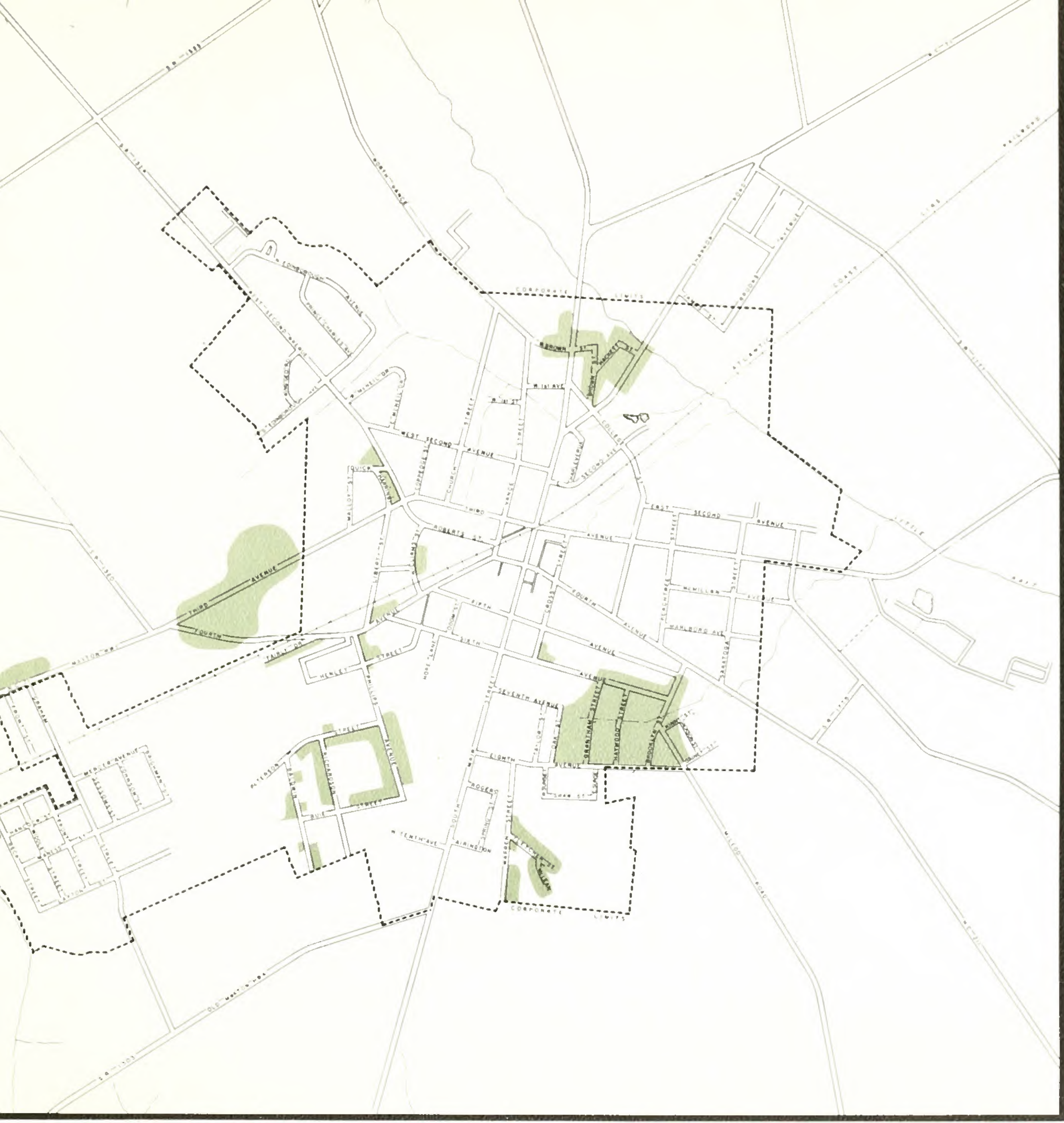
Deteriorating - Salvageable, but needing major repairs,

Dilapidated - Economically unfeasible to repair.

Of the 1,021 dwellings in the town, 736 were classified as sound, 234 as deteriorating, and 51 as dilapidated. Red Springs has an abundance of delightful and expensive housing units, but it also has some deplorable examples of substandard dwellings. Obviously, there are no simple solutions to the problems of a blighted living environment. The causes and cures are extremely complicated and oftentimes vague in nature. Poverty and ignorance are perhaps the worst enigma contributing to the social disorder of the living environment.

The major blighted areas are not located in the municipal limits of the town but within the one-mile extraterritorial jurisdiction and beyond in the predominantly rural fringe areas. The areas of substandard housing are illustrated in Figure 8. As previously mentioned, these areas are confined for the most part to lower economic classes and the minority ethnic group in four rather well defined segregated districts. In these areas there is a definite overcrowding of many persons or families into an inadequately sized household unit with too few and too small rooms.

Preventative and corrective measures should be adopted officially and judiciously enforced to check the initial conception and rapid spread of this malignant growth. There is no certain solution to cure all existing or threatening blight problems, deteriorating or dilapidated structures, and substandard neighborhoods. However, local codes, dedicated enforcement, zoning and subdivision ordinance adoption, comprehensive planning, clean up and fix up programs, building inspections, condemnation proceedings, subdivision regulations, slum clearance, public housing, educational programs and a public commitment to the revitalization of Red Springs can and will ultimately shrink a slum in size and scope.



AREAS OF BLIGHT

FIGURE 8

RED SPRINGS

NORTH CAROLINA

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Manufacturing

As was noted in the town's Population and Economy Study,[1] Red Springs' economy is, for the most part, dominated by textile mills. This industry employs more local people than any other activity, and thus occupies a significant place in the town's economy.

The largest uses of manufacturing land within the corporate limits are Liberty Manufacturing Company on Liberty Street and Red Springs Gin Company on East Sixth Avenue. Outside the town limits, industrial uses are confined to Red Springs Mill, Celluknit Corporation in the industrial park and a lumber sawmill on SR 1323.

The 19 acres of land in manufacturing uses within Red Springs' limits represent 2.6 percent of the developed land but only 1.7 percent of the total land in the community. In the entire planning area, 34.5 acres or 3.0 percent of the total developed land acreage is devoted to manufacturing uses.

These manufacturing land users show no particular concentration in any one section of the planning area. However, four of the activities are located on properties adjacent to railroad rights-of-way. The industrial park has an excellent location north of town on N. C. 211. The town provides water and sewerage as well as fire protection. This 124 acre area was subdivided into six tracts, one of which is occupied by a sewage lagoon. At present, the only manufacturing use there is Celluknit. This site will, however, provide for any unanticipated industrial growth in the area.

It is important to realize that not all industries possess the same characteristics nor do they all require similar sites and resources. For many years, industries were associated with smoke, odor, noise, fumes, vibrations, traffic and other nuisance creations. Some operations still deserve to be so classified. However, many modern plants, textiles included, possess few or no such characteristics, and should not be penalized without separate consideration of individual cases. It seems reasonable that precautions such as are available to industries will not only protect the residential and commercial enterprises, but will protect industries from each other as well.

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[1] Population and Economy, Red Springs, North Carolina, Department of Conservation and Development, Division of Community Planning, June, 1967.

Trade

Red Springs has numerous small businesses that come under this classification. Most of the trade type uses are dominated by general merchandise, food and automotive sales, service stations, home furnishings and apparel shops. The vast majority of these are to be found in the Central Business District with a few areas scattered along N. C. 211 and 71.

Small, well located trade uses can help to make a community of Red Springs' size more viable and less isolated by making convenient certain essential goods. If these stores have good access and plentiful parking, and if they present a reasonable appearance together with being compatible to surrounding uses, then they become invaluable to the community. However, if such stores lack these qualities, they will only add to the congestion and discomfort that already exists.

Fourteen and one-half acres of trade land uses presently exist within the town limits and approximately ten acres are in use throughout the fringe area. This amounts to about 2.2 percent of all developed land in the total planning area.

Services

Services are very similar in many ways to trade except the supply needs of an intangible nature to their individual clientele. Most of the service uses in Red Springs are located in the Central Business District or in close proximity to it. However, the larger land users such as cemeteries, water treatment plants, and the National Guard Armory are usually located in or near the fringe area where the sizable tracts they need are available at lesser costs.

Services within the corporate limits account for approximately 19.5 acres and comprise about 2.8 percent of the developed land. Outside of town, in the fringe, they account for 27.0 acres or 6.3 percent of the developed land. These service-type establishments include town governmental offices and facilities, professional offices, repair and cleaning shops, banking and finance, and other such establishments.

Most of the establishments in the service area consume little land space and normally situated well in the "downtown" area. When and if some of the service uses outgrow this area, suitable relocations at the appropriate time will benefit both the town and the concerns affected.

Social and Cultural

Social and cultural uses include the following: schools, parks and playgrounds, churches, libraries, theatres, riding stables, and any other institutional uses that contribute to the well-being of Red Springs. Within the categories of social and cultural land uses are two breakdowns: one, public, the other quasi-public. Public uses consist of municipal owned property such as schools and parks. Quasi-public consists essentially of public uses or services rendered but usually owned by private citizens or corporations. Such uses could be churches, fraternal organizations, riding stables and theatres.

Within the entire planning area there are 131.5 acres used for social and cultural purposes. This represents about 11.5 percent of the developed land in the planning area. The fringe has 17.5 acres or 4.1 percent of the developed land in this area. The town proper has 114 acres or 16.0 percent of the developed land. The apparent reason for the town having more acreage in social and cultural use is that the three public schools and Vardell Hall together with their recreational areas are located within the town limits.

Social and cultural land uses have a significant effect on the character and quality of life in a small town. Since they are for the benefit of groups of people, they should be conveniently located; and as a general rule, such has been the case in Red Springs. Although Red Springs High School is not centrally located in relation to population distribution, it is in an area where future expansion will be easily available. The churches of the town are located generally in residential neighborhoods where they can serve families conveniently.

The biggest problem area in this category seems to be the lack of recreational facilities such as public park and playgrounds apart from those offered by the school grounds. No recreational area whatsoever is offered in the southeast quadrant of town.

Undeveloped Land

There is a large amount of vacant and undeveloped land within the corporate limits of Red Springs. This includes woodland, farms, unused lots, and Little Raft Swamp. The largest expanses of undeveloped land in the town is in the southern section. The swamp area to the northeast prohibits urban growth because of being too "wet" to support building foundations. These areas are almost wholly devoted to woodland and are not served by any major streets or roads.

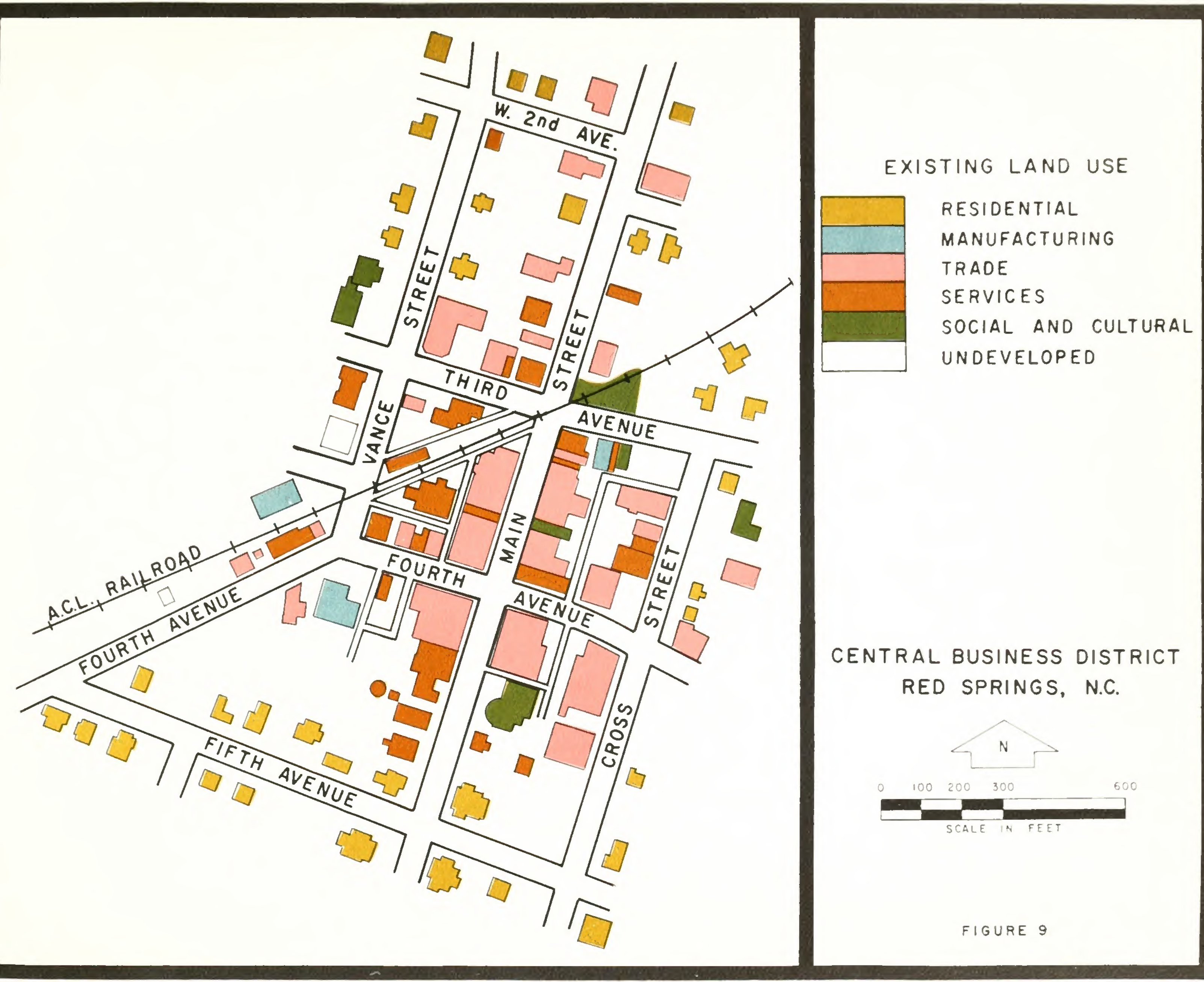
The largest tract of undeveloped land acts as a buffer between the mill area and the Peterson area. This 100 acres is devoted mostly to farmland. Another large vacant area separates the Peterson and South Main Street neighborhoods. A third undeveloped area of approximately 25 acres is found east of Warren Street and south of East Eighth Avenue. This area is about half farmland and half woodland.

Very little urban development has occurred in the fringe. Undeveloped land occupies the largest amount of acreage in all divisions of the Red Springs Planning Area. Within the corporate limits, 360.5 acres of land are in the undeveloped category which represents 33.6 percent of the total land acreage in the town. Within the one mile perimeter area, where most of the undeveloped acreage occurs, is 5,767 acres or over 93 percent of the total acreage devoted to all land uses.

Central Business District

Red Springs' "downtown" is not a central business district as commonly envisaged for cities of much larger size, but it still performs the important function as a major shopping area for the town and the surrounding townships. It would be possible to develop the central area along the lines of a medium-sized shopping center that would make it more attractive and convenient to potential shoppers. Availability of parking, pleasant surroundings and attractive stores, along with good merchandising techniques, help draw shoppers to an area.

Considering the present and foreseeable future size of Red Springs, the emphasis should be on strengthening the present central commercial area and



CENTRAL BUSINESS DISTRICT
RED SPRINGS, N.C.

FIGURE 9

maintaining it as a compact, convenient center. One step toward this objective would be to tighten up on uses permitted in the outlying commercial zones and compact growth in the central commercial zone.

Red Springs' Central Business District is bordered to the north by Second Avenue, the east by Cross Street, the south by Fifth Avenue, and the west by Vance Street and West Fourth Avenue. See Figure 9. This five block area contains about 35 acres that are devoted to all the previously mentioned land use categories. The predominant uses are trade and services with a newspaper office and cotton company accounting for the only industry. Social and cultural uses in the district consist of a movie theatre, churches, American Legion Hall, and the Vardell Rose Garden. The area is almost completely surrounded by residential uses.

Both on-street and off-street parking is provided for the users of Red Springs' Central Business District. Off-street parking areas can be found beside Bodenheimer's Furniture Store on Cross Street, beside the railroad off West Third Avenue, and behind the Town Hall. A problem does exist, however, with the on-street parking spaces being used for unreasonably long times by people employed in the downtown area. Such action prohibits shoppers from being able to park in front of or near the establishment in which he wishes to make a purchase.

Another problem that was noticed in the field survey was the number of upper floors which were vacant in the Central Business District. For the merchants to get the maximum use out of the downtown area, they should make better use of the second stories of the buildings - if only for storage.

Transportation

Streets, roads and railroad rights-of-way rank high in total acreage of all the developed land users in Red Springs. Approximately 24 acres, representing 3.7 percent of the developed land and .22 percent of the total land in the corporate limits, is dedicated to railroad rights-of-way. Within the entire Red Springs Planning Area, about 53 acres or 4.6 percent of the total developed land is dedicated to railroad uses. Within the corporate limits 149 acres are dedicated to streets and roads, whereas in the fringe 168.5 acres are used in this type of land use.

The 173 acres of land in transportation uses within Red Springs' limits represent 24.3 percent of the developed land, whereas in the fringe, 197.5 acres represent 45.9 percent of the land in use. In the total planning area 370.5 acres are devoted to streets, roads and railroad rights-of-way.

CONCLUSION

CONCLUSION

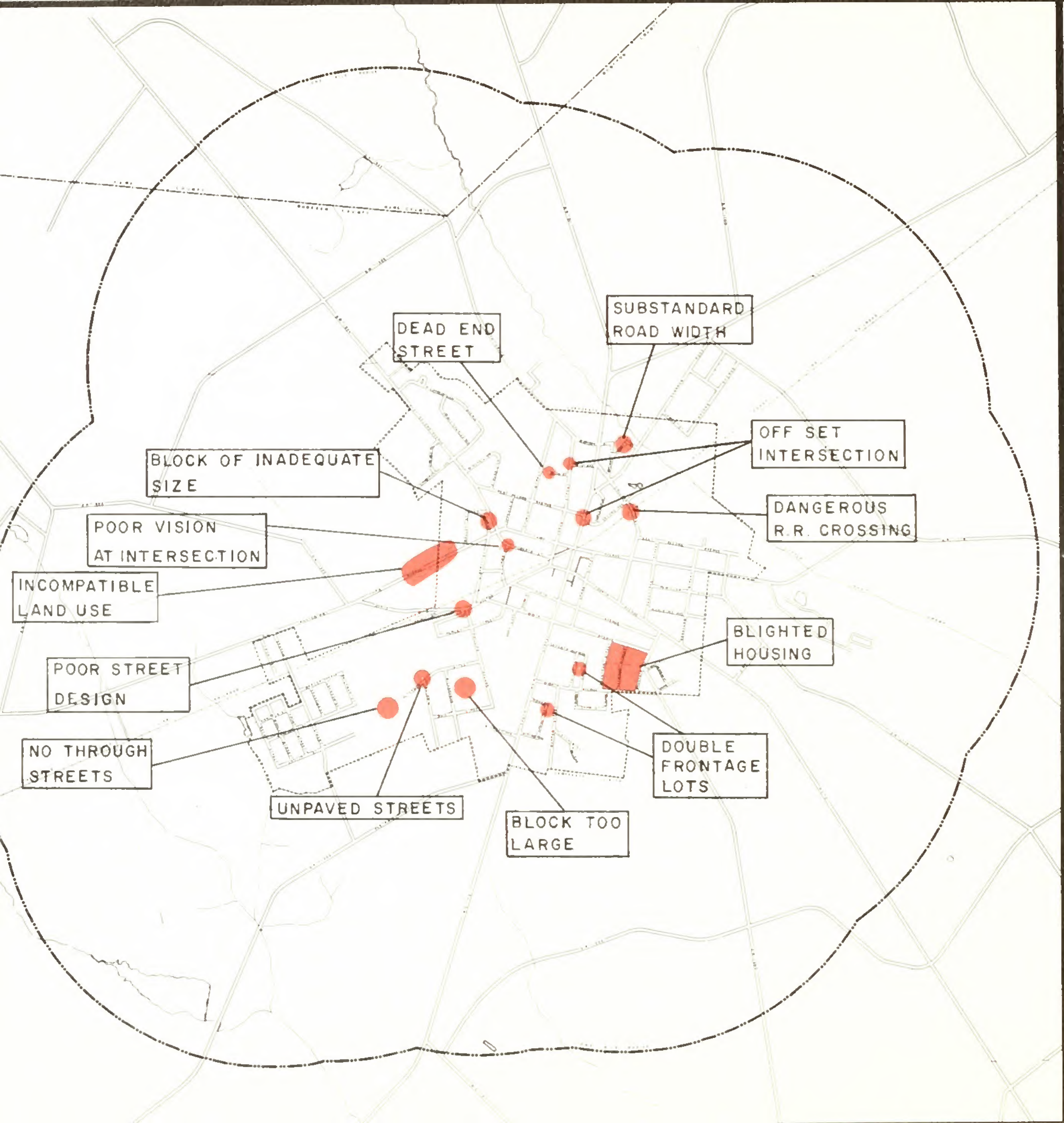
This analysis of existing land use in the Red Springs' Planning Area represents a current and comprehensive survey of physical and social elements that the Town Commissioners and Zoning Board will find helpful in formulating the community plans of the future.

A Land Development Plan for the area will be tailored from the information contained in this analysis which will be the basis for a continuing planning program. It is anticipated that town governing officials, public boards, and private citizens will gain insight into problems of zoning, subdivision regulations, public improvement programs, acquisition of streets rights-of-way, and water and sewer extensions. Social organizations, private business, and industry may use the report data for location of new facilities or relocation of operations from old to new land sites.

Findings

Just as Red Springs has many attributes it can be proud of - established residential areas with paved streets, basic industries, large school sites, compact Central Business District, and other qualities such as Vardell Hall - it also has certain areas and land development problems which are liabilities. Several of these problems are pointed out in Figure 10 on the following page.

The areas of blight, throughout Red Springs, perhaps present the most outstanding liability. These areas should be given priority in extending needed public facilities to their people. For the most part, the blighted areas' streets are too narrow, have inadequate water and sewerage service, and the lots are of irregular



LAND USE PROBLEMS

FIGURE 10

RED SPRINGS

NORTH CAROLINA

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shape and size. Public housing is not always the answer to such problems, but in Red Springs it should be given consideration.

Red Springs' central trade and service area has been kept compact and tailored to the pedestrian scale. Linear growth should be discouraged along Main Street and to the west. If future expansion is required, it should be directed eastward because such expansion would serve the majority of the town population living in that direction.

Land uses of a traffic generating nature should be encouraged to locate adjacent to major thoroughfares and/or rail carriers. These land uses should also be situated in an area within the town's fire district.

The newer residential areas appear to be quite stable and free from mixed land uses. There are some substantial older residential areas which are generally quite pleasant although a few of the individual older homes may require some rehabilitation to prevent deterioration to their neighborhood.

At present, a large amount of traffic is funneled into Main Street from N. C. 211 and 71. Red Springs' traffic problems will be minimized in a forthcoming thoroughfare plan adopted by town officials and the State Highway Commission. Discussion about the plan will be in great detail in the Land Development Plan. A well designed bypass would indeed eliminate the vast majority of "through" traffic along Main Street.

Summary

The comprehensive planning program for the Red Springs Planning Area will help to reduce and eliminate the existing land use problems and assist in the prevention of future problem areas. The Development Plan will suggest the arrangement of compatible and orderly land uses in the urban and fringe development areas of the future as well as preserving the amenities existing in the town and beyond at the present time.

Following is an enumeration of the major conclusions drawn from the material presented in this report:

(1) Unless Red Springs annexes areas adjacent to its municipal limits, a population of 4,500 is projected for 1980. If further annexations occur and depending on the degree of action taken locally to make the community more attractive and more livable, the population for 1980 could greatly exceed these anticipated figures.

(2) The economy of Red Springs is centered around textiles, educational services, and retail sales. To strengthen the economy will depend to a great extent on the town's success in attracting new and diversified industries.

(3) Red Springs is relatively "free" of the mixture of land uses that is often found in communities of similar size.

(4) 33.6 percent of the incorporated area is undeveloped.

(5) Future urban development should be encouraged within the corporate limits of the town since most of that area is already serviced by municipal water and sewerage.

(6) The most suitable areas for urban development are in the southwest quadrant between Westside Heights and the Peterson area, between Phillips Avenue and South Main Street, the Pecan Orchard area, and the southeast quadrant south of Eighth Avenue.

(7) The most unsuitable areas for urban expansion are due west of town beyond the corporate limits and the Little Raft Swamp Area. Land in these areas are unsuitable for septic tanks and have severe limitations concerning the support of construction.

Overall, the existing land use of Red Springs appears to be a fairly logical and efficient pattern. The largest task for town officials and the general citizenry to encounter is to implement a plan making certain that the town stays that way.

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